

A NEW PARASITE OF *ANTHRENUS VORAX* WATERHOUSE.

By E. A. BACK,

U. S. Department of Agriculture, Bureau of Entomology and Plant Quarantine.

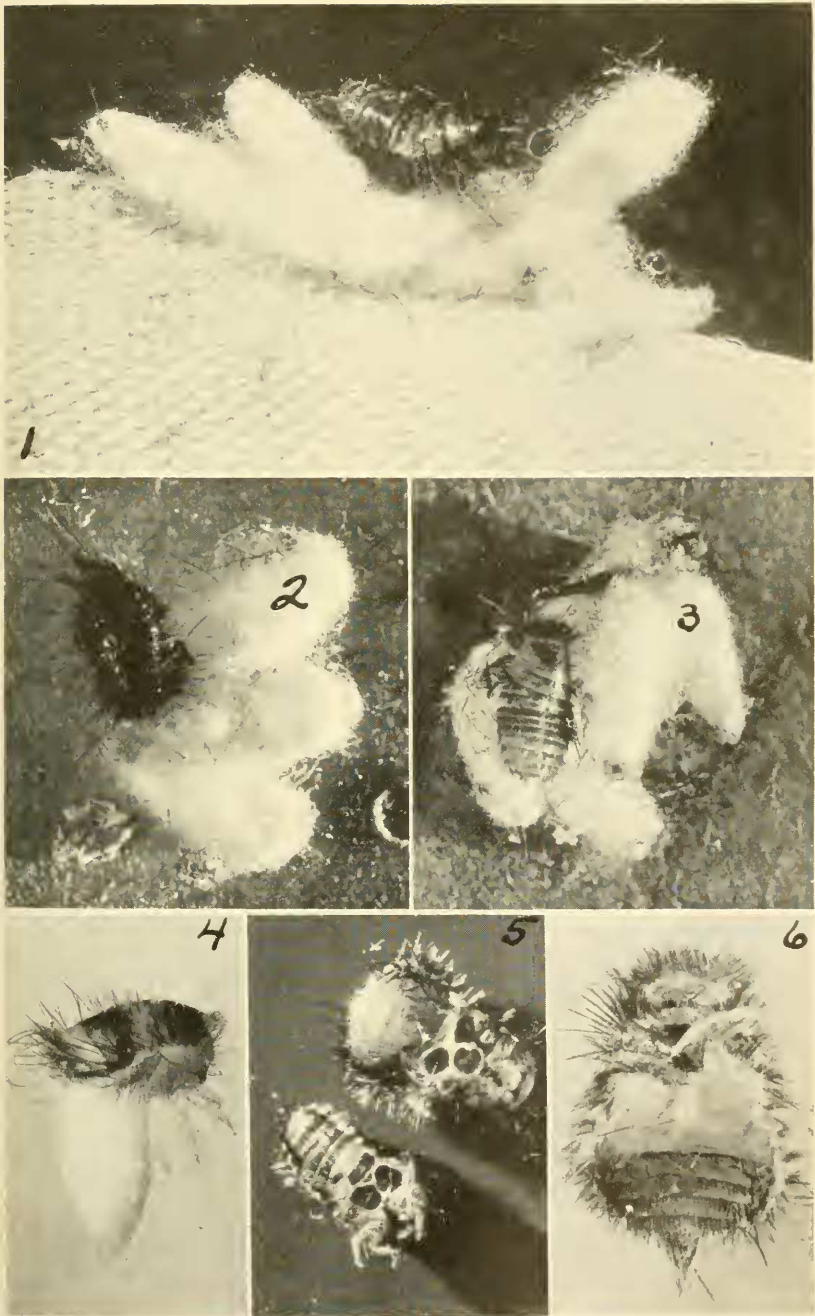
When the writer was engaged in the Federal investigations of the Mediterranean fruitfly (*Ceratitis capitata* (Wied.)) in the Hawaiian Islands he watched with interest the results of the expeditions conducted by the Hawaiian Department of Agriculture and Forestry into Africa and Australia to discover and introduce into Hawaii parasites of this pest. When D. T. Fullaway liberated a small culture of the introduced *Opius humilis* Silv. in the Kona coffee district the writer asked Frederick Muir how soon this parasite might be expected to be of practical importance. He was surprised to learn that Mr. Muir hoped for results within two years. During the second season after the liberation of the parasite, adult *Opius* could be seen flying by the thousands among the coffee trees, and many batches of infested coffee berries showed a parasitization of the fruitfly running between 90 and 99 per cent.

The foregoing experience has made unusually interesting to the writer his discovery of numerous instances of parasitization of the furniture carpet beetle (*Anthrenus vorax* Waterhouse) during the past summer and fall by a bethylid since described by C. F. W. Muesebeck as *Laelius voracis* Muesebeck.¹ The parasitized carpet beetle larvae were found originally during May and June, 1939, in widely separated storage houses in Washington, D. C., but have since established themselves in the laboratory through the introduction of infested rugs, furs, and clothing, and have made difficult the rearing of *vorax* by the usual method in infested merchandise held in storage boxes. From one to four parasites develop in a single well grown *vorax* larva. Parasitized larvae appear as indicated in Figure 6, their shape being altered somewhat by the developing parasites. The well grown parasite larvae leave the host through openings made in the venter at about the union of the abdomen and thorax as indicated in Figure 5. In Figure 4 is shown a larva of the closely related *Laelius tricarinatus* Ashmead which died during the process of emerging from a larva of *Anthrenus verbasci* L.

The white cocoons (Figs. 1-3) are usually spun by the larvae beneath or just to one side of the host, although they may be spun in cast larval skins of *vorax* if these happen to be close to the parasitized host.

Since the furniture carpet beetle was first discovered estab-

¹ Muesebeck, C. F. W. The North American species of the genus *Laelius* Ashmead (Hymenoptera: Bethyidae). Biol. Soc. Wash. Proc., vol. 52, pp. 171-176, Dec. 15, 1939.



lished in Washington, D. C., in 1915² no instance of its parasitization has been detected until this year in spite of the fact that thousands of specimens have been sent to the Federal Bureau of Entomology and Plant Quarantine for identification from all parts of Washington and vicinity, and cultures of *vorax* have been maintained continuously in storage rooms at the Department of Agriculture for over 15 years. In some instances cultures of *Anthrenus vorax* in brushes, which had been active for two and three years, were completely destroyed by *Laelius voracis* during the summer of 1939. In one instance every bristle hole in a brush contained cocoons of the parasite. It is always interesting to record the first appearance of a parasite attacking a pest of prime importance, and in this instance it is especially so because for nearly 25 years the furniture carpet beetle has been spreading actively, apparently without being checked by any parasite.

HERIADINE BEES FROM THE BELGIAN CONGO.

By T. D. A. COCKERELL.

Heriades pachyacanthus, sp. n.

Male.—Length about 7.5 mm., anterior wing 5; black, including mandibles and tegulae, the long antennae (reaching scutellum) obscurely brownish beneath; pubescence white, long and abundant on front (where directed upward), sides of face, and lower half of clypeus except in middle; head broad, but facial quadrangle much longer than broad; mandibles robust, tridentate, the cutting edge very oblique; labial palpi stout; clypeal margin denticulate; upper margin and broad middle of clypeus shining, the shining area shaped rather like the skull of a long-horned ox; vertex with dense large punctures; tegulae minutely punctured; mesothorax with large dense punctures, the intervals shining; scutellum prominent, conspicuously shining but well punctured; axillae stout, spined, but the spines thick and not long; postscutellum entirely dull, but base of metathorax with a broad shining band; wings greyish, not brown, in some lights appearing somewhat milky; stigma dusky red, not very dark, not very robust; nervures brown; basal nervure little arched, falling considerably short of nervulus; second cubital cell rather short, receiving first recurrent nervure some distance from base, and second near end; hair on inner side of hind tarsi fulvous; abdomen closely punctured, third tergite conspicuously shining, fourth dull; tergites 2 to 4 with narrow marginal hair-bands, and white hair at apical sides of first; basal area of first sharply defined; apical margin strongly concave; genitalia pale reddish; second ventral segment elevated, with a very long dense fringe of white hair.

² Back, E. A., and Cotton, R. T. The furniture carpet beetle (*Anthrenus vorax* Waterhouse), a pest of increasing importance in the United States. Ent. Soc. Wash. Proc., vol. 38, no. 9, pp. 189–198, illus., Dec. 1936.